

[PEER-TO-PEER FAULT DETECTION]

Abstract of Disclosure

This invention discloses a fault or abnormal status detection mechanism applied to distributed networks considering a shared media. A set of programmed routines executing in every node connected to a distributed network establish pairs of inter-monitoring nodes. At system power up, every node searches for another free, unpaired node using random timeout messaging generation to prevent collisions of network messages. After all pairs have been formed, a periodic check message is sent from one node to its associated partner (and vice versa) requesting its operating status. A response, containing a node's status, is generated upon receipt of a check message. If an abnormal status is received, or there is no response, a report is sent to a monitoring station or stored as a failure network event. The timeout period, in the order of seconds, between each check message is adjusted according to the number of connected nodes and available network bandwidth. This prevents excessive traffic generation that could affect performance. A longer timeout period, in the order of minutes, indicates when to restart the pair assignment process again, periodically changing all established pairs.

Figures

FIGURE 1